

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



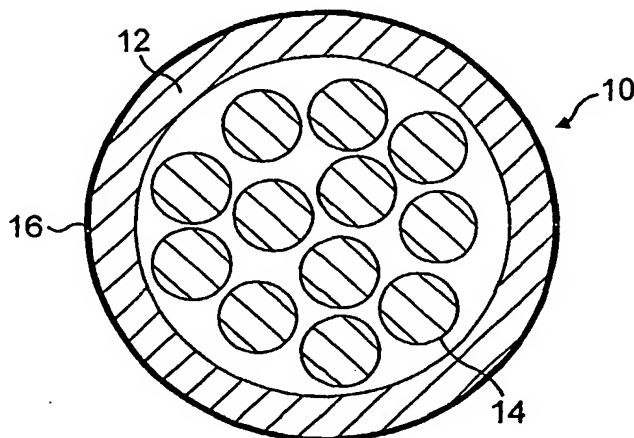
(43) International Publication Date
9 October 2003 (09.10.2003)

PCT

(10) International Publication Number
WO 03/083515 A3

- (51) International Patent Classification⁷: **G02B 6/44** (74) Agents: **BALDWIN, Mark et al.**; R G C Jenkins & Co., 21 Caxton Street, London SW1H 0RJ (GB).
- (21) International Application Number: PCT/GB03/01064
- (22) International Filing Date: 13 March 2003 (13.03.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
02252345.0 28 March 2002 (28.03.2002) EP
- (71) Applicants (for all designated States except US): **PIRELLI GENERAL PLC** [GB/GB]; 15 Grosvenor Street, London W1K 4QZ (GB). **PIRELLI & C. S.p.A.** [IT/IT]; Viale Sarca, 222, I-20126 Milano (IT).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **SUTEHALL, Ralph** [GB/GB]; c/o Pirelli Cables Ltd., Chikenhall Lane, Bishopstoke, Eastleigh 2BA, Hampshire SO50 6YU (GB). **DAVIES, Martin, Vincent** [GB/GB]; c/o Pirelli Cables Ltd., Chikenhall Lane, Bishopstoke, Eastleigh, Hampshire SO50 6YU (GB). **PIKE, Roger, John** [GB/GB]; c/o Pirelli Cables Ltd., Chikenhall Lane, Bishopstoke, Eastleigh, Hampshire SO50 6YU (GB). **CESCHIAT, Davide** [IT/IT]; c/o Pirelli SpA, Viale Sarca, 222, I-20126 Milano (IT). **PIZZORNO, Massimo** [IT/IT]; c/o Pirelli SpA, Viale Sarca, 222, I-20126 Milano (IT).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- search report
- Announcement of the international search report:
18 December 2003
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COATED OPTICAL FIBRE UNIT AND METHODS OF MANUFACTURING COATED OPTICAL FIBRE UNITS



(57) Abstract: An optical fibre unit (10) comprises a sheath (12) and a plurality of optical fibre element (14) loosely housed in the sheath. The sheath is coated with particles of an adherence reducing substance and has a radial thickness that is not substantially greater than 0.3mm. The coating (16) of adherence reducing particles is applied as a liquid coating comprising a dispersion of the particles and heat is applied to evaporate the liquid content of the liquid coating to produce a dry coating of particles on the sheath.

WO 03/083515 A3

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 03/01064

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G02B6/44

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G02B C03C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00 58768 A (BROWN TONY ;SHACKLETON NIGEL (GB); PIRELLI CAVI E SISTEMI SPA (IT)) 5 October 2000 (2000-10-05) cited in the application page 9, line 20 - line 24; figure 1 page 10, line 3 - line 6 page 12, line 32 - page 13, line 6	1-10
X	GB 2 146 444 A (ADAM TELECOMM) 16 October 1995 (1995-10-16) cited in the application	1, 28, 29, 31
A	page 1, line 45 - line 48 page 2, line 42 - line 50 figure 2	30, 32

-/-		

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

18 September 2003

Date of mailing of the international search report

26/09/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Ciarrocca, M

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 03/01064

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 108 590 A (BRITISH TELECOMM) 16 May 1984 (1984-05-16) cited in the application page 9, line 10 - line 11; figure 2 page 17, line 15 - line 19	1-10, 28, 29, 31
A	DE 100 03 470 A (SIEMENS AG) 2 August 2001 (2001-08-02) column 7, line 34 - line 37	1, 4
X	DATABASE WPI Section Ch, Week 198449 Derwent Publications Ltd., London, GB; Class A89, AN 1984-303480 XP002212808 & JP 59 188604 A (SHOWA ELECTRIC WIRE CO LTD), 26 October 1984 (1984-10-26)	11, 13-16
A	abstract	4, 6, 7, 30, 32
A	PATENT ABSTRACTS OF JAPAN vol. 009, no. 050 (P-339), 5 March 1985 (1985-03-05) & JP 59 188604 A (SHOWA DENSEN DENRAN KK), 26 October 1984 (1984-10-26) abstract	1, 4, 11
	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 05, 31 May 1999 (1999-05-31) & JP 11 038237 A (OLYMPUS OPTICAL CO LTD), 12 February 1999 (1999-02-12) abstract	11
A	abstract	30, 32
X	EP 0 527 266 A (CORNING INC) 17 February 1993 (1993-02-17)	11, 19
A	page 4, line 40 - line 55; figures 1, 2 page 5, line 50 - line 53	30, 32
X	US 6 146 699 A (BONICEL JEAN-PIERRE ET AL) 14 November 2000 (2000-11-14)	11, 25
A	column 2, line 45 - line 67; figure 1	30, 32

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/01064

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0058768	A	05-10-2000	
		AU 3963400 A	16-10-2000
		CA 2367814 A1	05-10-2000
		WO 0058768 A1	05-10-2000
		EP 1163547 A1	19-12-2001
		JP 2002540466 T	26-11-2002
		US 2002159726 A1	31-10-2002
GB 2156837	A	16-10-1985	NONE
EP 0108590	A	16-05-1984	
		AT 23926 T	15-12-1986
		AT 134046 T	15-02-1996
		AU 585479 B2	22-06-1989
		AU 2102883 A	17-05-1984
		CA 1246842 A1	20-12-1988
		CA 1258390 A2	15-08-1989
		DE 3367981 D1	15-01-1987
		DE 3382801 D1	21-03-1996
		DE 3382801 T2	14-08-1996
		EP 0108590 A1	16-05-1984
		EP 0186753 A2	09-07-1986
		HK 55888 A	29-07-1988
		HK 109397 A	22-08-1997
		JP 2217803 A	30-08-1990
		JP 2217804 A	30-08-1990
		JP 2265109 A	29-10-1994
		JP 2210304 A	21-08-1993
		JP 2210305 A	21-08-1993
		JP 2210306 A	21-08-1993
		JP 2210307 A	21-08-1993
		JP 2217805 A	30-08-1994
		JP 1846709 C	07-06-1994
		JP 2022921 B	22-05-1990
		JP 59104607 A	16-06-1984
		JP 2552588 B2	13-11-1996
		JP 5142429 A	11-06-1993
		JP 2552589 B2	13-11-1996
		JP 5249321 A	28-09-1993
		JP 5150121 A	18-06-1993
		JP 2552590 B2	13-11-1996
		JP 5127023 A	25-05-1993
		JP 2538454 B2	25-09-1996
		JP 6186440 A	08-07-1994
		JP 2552591 B2	13-11-1996
		JP 5142430 A	11-06-1993
		JP 2552592 B2	13-11-1996
		JP 5100120 A	23-04-1993
		JP 5142431 A	11-06-1993
		SG 110287 G	20-05-1988
		US 4796970 A	10-01-1989
		US 4948097 A	14-08-1990
		US 5121901 A	16-06-1992
		US 5645267 A	08-07-1997
		US 6328283 B1	11-12-2001
		US 5169126 A	08-12-1992
		US 4691896 A	08-09-1987
		US 6173107 B1	09-01-2001
		US 5456450 A	10-10-1995

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 03/01064

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 10003470	A	02-08-2001	DE 10003470 A1	02-08-2001
JP 59188604	A	26-10-1984	NONE	
JP 11038237	A	12-02-1999	NONE	
EP 0527266	A	17-02-1993	US 5181268 A	19-01-1993
			AU 8834191 A	09-09-1993
			CA 2057503 A1	13-02-1993
			DE 69119899 D1	04-07-1996
			DE 69119899 T2	16-01-1997
			EP 0527266 A1	17-02-1993
			ES 2087225 T3	16-07-1996
			JP 3174838 B2	11-06-2001
			JP 5045546 A	23-02-1993
US 6146699	A	14-11-2000	FR 2768849 A1	26-03-1999
			DE 69804738 D1	16-05-2002
			DE 69804738 T2	14-11-2002
			EP 0905716 A1	31-03-1999
			JP 11167826 A	22-06-1999